APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/429,632	10/29/1999	SHIGEO MATSUZAWA	040301/0575	6154

7590   11/20/2002

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EXAMINER
HO, CHUONG T

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___three___ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL**. ·   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-20* _____ is/are pending in the application.

   4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-20* _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

   If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All b) ☐ Some* c) ☒ None of:

   1. ☒ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

   a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). __2__

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____

DETAILED ACTION

1.   Acknowledgment is made of applicant's claim for foreign priority based on an application

filed in JAPAN on 10/30/98 . It is noted, however, that applicant has not filed a certified copy

of the P10-311315 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth
> in section 102 of this title, if the differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

3.   Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han

(U.S.Patent No. 6,351,465 B1) in view of Katsube et al. (U.S.Patent No. 6,185,213 B1).

In the claim 1, see figures 4-5, Han discloses the system uses ATM switches as high

performance Internet router by using standard ATM signaling to set up cut-through paths;

comprising:

◆   a cut-through path control system at a router device (ATM router 50) at which multi-path

exists (43, 45), comprising the steps of:

◆   selecting one router among a plurality of routers (42, 44, 46, 48) that can possibly be a

next hop router (see col. 6, lines 1-8);

♦   setting up the cut-through path with one router as the next hop router (see col. 6, lines 26-

35).

However, Han does not disclose selecting one router among a plurality of routers so as to

contributye a load balancing.

Katsube et al. discloses a packet transfer control system and a node device which are

capable of providing a dedicated cut-through path for specific end-to-end packet flow, while

reducing a time required until the cut-through path is established, so to able to reduce the load of

the address analysis processing at the router; comprising:

♦   selecting one router among a plurality of routers so as to contributye a load balancing (see

col. 2, lines 47-49);

♦   according to a whole or a prescribed part of information regarding a state of cut-through

path set-up in which the router device is involved (see col. 8, lines 40-45, lines 60-67), at

a time of setting up a cut-through path in the multi-path.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Han's system with the teaching of Katsube to select one router among a

plurality of routers in order to contribute the load balancing. Therefore, the combined system

would have been enable the cut-throudh paths with respect to the routers can be balanced overall.

4.   In the claims 2, 13, 15, Han discloses the selecting one router according to a number of

already set up cut-through paths such that number of cut-through paths at plurality of routers are

uniformly distrubuted among plurality of routers (see col. 6, lines 30-55).

5.   In the claim 3, Katsube et al. discloses assigning possible residue values starting from O

that are obtainable by dividing a given integer by a total number of plurality of routers,

respectively to plurality of routers, one residue value per each router (see col. 7, lines 29-31);

selecting one of plurality of routers which is assigned with a residue value obtained by dividing

the number of already set up cut-through paths by the total number of plurality of routers as one

router (see col. 8, lines 50-67, col. 9, lines 1-4).

6.   In the claims 4, 16, Han discloses selecting one router according to a number of already

set up cut-through paths such that numbers of cut-through paths at plurality of routers are evently

distributed among plurality of routers according to link rates with respect to plurality of routers

(see col. 6, lines 30-55).

7.   In the claims 5, 12, Katsube et al. discloses assigning possible residue values starting from

O that are obtainable by dividing a given integer by a total of elements constituting an integer

ratio indicating or approximating a ratio of the link rates with respect to plurality of routers,

respectively to plurality of routers, as may residues values as a number proportional to a link rate

with respect to each router per each router; and selecting one of plurality of routers which is

assigned with residue value obtained by dividing the number of already set up cut-through paths

by the total of the elements constituting the integer ratio as one router (see col. 8, lines 40-67,

col. 9, lines 1-4).

8.   In the claim 6, Katsube et al. discloses sending a message for setting up the cut-through path

to one router; and making an information setting necessary for utilizing the cut-through path

when the cut-through path is set up (see col. 10, lines 6-25).

9.   In the claim 7, Katsube et al. discloses sending a message for setting up the cut-through path

to one router when no other already set up cut-through path to one router exists, and making an

information setting necessary for utilizing the cut-through path when the cut-through path is set

up; and making another information setting necessary for merging the cut-through path with an

already set up cut-through path to one router when the already set up cut-through path exists (see

col. 10, lines 5-25).

10.   In the claim 8, Katsube et al. discloses the setting up of the cut-through path starts a

timing of receiving a message for setting up the cut-through path from a node device on an

upstream side (see col. 10, lines 53-55).

11.   In the claims 9, 11, 18, Katsube et al. discloses selecting one cut-through path that

contributes to the load balancing when a route change is made, among cut-through paths for

which the route change at the router device is possible; and changing a route of one cut-through

path so as to contribute to the load balancing (see col. 2, lines 45-50).

12.   In the claim 10, see figures 4-5, Han discloses the system uses ATM switches as high

performance Internet router by using standard ATM signaling to set up cut-through paths;

comprising:

- ◆ a cut-through path control system at a router device (ATM router 50) at which multi-path exists (43, 45), comprising the steps of:

- ◆ selecting one router among a plurality of routers (42, 44, 46, 48) that can possibly be a next hop router (see col. 6, lines 1-8);

- ◆ setting up the cut-through path with one router as the next hop router (see col. 6, lines 26-35).

However, Han does not disclose selecting one router among a plurality of routers so as to contributye a load balancing.

Katsube et al. discloses a packet transfer control system and a node device which are capable of providing a dedicated cut-through path for specific end-to-end packet flow, while reducing a time required until the cut-through path is established, so to able to reduce the load of the address analysis processing at the router; comprising:

- ◆ selecting one router among a plurality of routers so as to contributye a load balancing (see col. 2, lines 47-49);

- ◆ according to a whole or a prescribed part of information regarding a state of cut-through path set-up in which the router device is involved (see col. 8, lines 40-45, lines 60-67), at a time of setting up a cut-through path in the multi-path.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Han's system with the teaching of Katsube to select one router among a

plurality of routers in order to contribute the load balancing. Therefore, the combined system

would have been enable the cut-throudh paths with respect to the routers can be balanced overall.

13.   In the claim 14, see figures 4-5, Han discloses the system uses ATM switches as high

performance Internet router by using standard ATM signaling to set up cut-through paths;

comprising:

♦   a cut-through path control system at a router device (ATM router 50) at which multi-path

        exists (43, 45), comprising the steps of:

♦   selecting one router among a plurality of routers (42, 44, 46, 48) that can possibly be a

        next hop router (see col. 6, lines 1-8);

♦   setting up the cut-through path with one router as the next hop router (see col. 6, lines 26-

        35).

However, Han does not disclose selecting one router among a plurality of routers so as to

contributye a load balancing.

Katsube et al. discloses a packet transfer control system and a node device which are

capable of providing a dedicated cut-through path for specific end-to-end packet flow, while

reducing a time required until the cut-through path is established, so to able to reduce the load of

the address analysis processing at the router; comprising:

♦   selecting one router among a plurality of routers so as to contributye a load balancing (see

        col. 2, lines 47-49);

♦   according to a whole or a prescribed part of information regarding a state of cut-through

path set-up in which the router device is involved (see col. 8, lines 40-45, lines 60-67), at

a time of setting up a cut-through path in the multi-path.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Han's system with the teaching of Katsube to select one router among a

plurality of routers in order to contribute the load balancing. Therefore, the combined system

would have been enable the cut-throudh paths with respect to the routers can be balanced overall.

14.   In the claim 17, see figures 4-5, Han discloses the system uses ATM switches as high

performance Internet router by using standard ATM signaling to set up cut-through paths;

comprising:

♦   a cut-through path control system at a router device (ATM router 50) at which multi-path

exists (43, 45), comprising the steps of:

♦   selecting one router among a plurality of routers (42, 44, 46, 48) that can possibly be a

next hop router (see col. 6, lines 1-8);

♦   setting up the cut-through path with one router as the next hop router (see col. 6, lines 26-

35).

However, Han does not disclose selecting one router among a plurality of routers so as to

contributye a load balancing.

Katsube et al. discloses a packet transfer control system and a node device which are

capable of providing a dedicated cut-through path for specific end-to-end packet flow, while

reducing a time required until the cut-through path is established, so to able to reduce the load of

the address analysis processing at the router; comprising:

♦   selecting one router among a plurality of routers so as to contributye a load balancing (see

col. 2, lines 47-49);

♦   according to a whole or a prescribed part of information regarding a state of cut-through

path set-up in which the router device is involved (see col. 8, lines 40-45, lines 60-67), at

a time of setting up a cut-through path in the multi-path.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Han's system with the teaching of Katsube to select one router among a

plurality of routers in order to contribute the load balancing. Therefore, the combined system

would have been enable the cut-throudh paths with respect to the routers can be balanced overall.

15.   In the claim 19, see figures 4-5, Han discloses the system uses ATM switches as high

performance Internet router by using standard ATM signaling to set up cut-through paths;

comprising:

♦   a cut-through path control system at a router device (ATM router 50) at which multi-path

exists (43, 45), comprising the steps of:

♦   selecting one router among a plurality of routers (42, 44, 46, 48) that can possibly be a

next hop router (see col. 6, lines 1-8);

♦   setting up the cut-through path with one router as the next hop router (see col. 6, lines 26-

35).

However, Han does not disclose selecting one router among a plurality of routers so as to contributye a load balancing.

Katsube et al. discloses a packet transfer control system and a node device which are capable of providing a dedicated cut-through path for specific end-to-end packet flow, while reducing a time required until the cut-through path is established, so to able to reduce the load of the address analysis processing at the router; comprising:

◆   selecting one router among a plurality of routers so as to contributye a load balancing (see col. 2, lines 47-49);

◆   according to a whole or a prescribed part of information regarding a state of cut-through path set-up in which the router device is involved (see col. 8, lines 40-45, lines 60-67), at a time of setting up a cut-through path in the multi-path.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Han's system with the teaching of Katsube to select one router among a plurality of routers in order to contribute the load balancing. Therefore, the combined system would have been enable the cut-throudh paths with respect to the routers can be balanced overall.

16.   In the claim 20, see figures 4-5, Han discloses the system uses ATM switches as high performance Internet router by using standard ATM signaling to set up cut-through paths; comprising:

◆   a cut-through path control system at a router device (ATM router 50) at which multi-path exists (43, 45), comprising the steps of:

♦   selecting one router among a plurality of routers (42, 44, 46, 48) that can possibly be a

next hop router (see col. 6, lines 1-8);

♦   setting up the cut-through path with one router as the next hop router (see col. 6, lines 26-

35).

However, Han does not disclose selecting one router among a plurality of routers so as to

contributye a load balancing.

Katsube et al. discloses a packet transfer control system and a node device which are

capable of providing a dedicated cut-through path for specific end-to-end packet flow, while

reducing a time required until the cut-through path is established, so to able to reduce the load of

the address analysis processing at the router; comprising:

♦   selecting one router among a plurality of routers so as to contributye a load balancing (see

col. 2, lines 47-49);

♦   according to a whole or a prescribed part of information regarding a state of cut-through

path set-up in which the router device is involved (see col. 8, lines 40-45, lines 60-67), at

a time of setting up a cut-through path in the multi-path.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Han's system with the teaching of Katsube to select one router among a

plurality of routers in order to contribute the load balancing. Therefore, the combined system

would have been enable the cut-throudh paths with respect to the routers can be balanced overall.

Application Number: 09/429,632

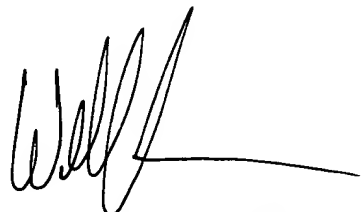Art Unit: 2664

Conclusion

17.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Chuong Ho whose telephone number is (703)306-4529. The

examiner can normally be reached on Monday-Friday from 9am to 3pm.

18.   If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Wellington, Chin, can be reached on (703)305-4633.

Any inquiry of a general nature or relating to the status of this application or proceeding   should

be direct to the group receptionist whose telephone number is (703) 305-3900.

CH

Date 11-16-02.

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600